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(71) Applicant and

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(74) Agent: SONN & PARTNER PATENTANWAELTE; Riemergasse 14, A-1010 Wien (AT).

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(54) Title: METHODS FOR PREVENTING AND TREATING ALZHEIMER'S DISEASE (AD)

(57) Abstract: The invention relates to the use of a compound comprising the following amino acid sequence $X_1X_2X_3X_4X_5X_6$, wherein X_1 is an amino acid, except of C, X_2 is an amino acid, except of C, X_3 is an amino acid, except of C, X_4 is an amino acid, except of C, X_5 is an amino acid, except of C, and wherein $X_1X_2X_3X_4X_5X_6$ is not DAEFRH, said compound having a binding capacity to an antibody being specific for the natural N-terminal AB42 sequence DAEFRH, and 5-mers thereof having a binding capacity to said antibody being specific for the natural N-terminal AB42 sequence DAEFRH, for the preparation of a vaccine for Alzheimer's disease.

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national Application No PCT/EP2004/000162

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 C07K14/47 A61K38/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 C07K A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, MEDLINE, BIOSIS, EMBL

DOCUME	ENTS CONSIDERED TO BE RELEVANT					
ategory °	Citation of document, with indication, where appropriate, of the relevant passages					
x	WO 00/72880 A (SCHENK DALE B (US); BARD FREDERIQUE (US); I () 7 December 2000 (2000-12-0) page 2, line 28 - page 6, line 29 page 16, line 26 - page 17, line 26 - page 17, line 28 - page 17, line 29 page 16, line 28 - page 17, line 28 - page 18 - p	NEURALAB LTD 07) ne 14	1-9			
A .	REINEKE U ET AL: "Identification distinct antibody epitopes are from a peptide array of 5520 generated sequences" JOURNAL OF IMMUNOLOGICAL METHOD. 267, no. 1, 1 September 2002 (2002-09-01) 37-51, XP004372978 ISSN: 0022-1759 cited in the application the whole document	nd mimotopes randomly HODS,	1-9			
X Furthe	er documents are listed in the continuation of box C.	-/ X Patent family members are listed	n annex.			
Special cate	egories of cited documents :					
A' documer conside E' earlier do filing da L' documen which is citation o' documen other me documen later tha	nt defining the general state of the art which is not red to be of particular relevance ocument but published on or after the international te to the common of the common	 To later document published after the linter or priority date and not in conflict with cited to understand the principle or the invention 'X' document of particular relevance; the coannot be considered novel or cannot involve an inventive step when the document of particular relevance; the coannot be considered to involve an involve an involve an involve an involve and coursent is combined with one or moments, such combination being obvious in the art. '&' document member of the same patent in the art. 	the application but acory underlying the laimed invention be considered to cument is taken alone laimed invention rentive step when the re other such docusis to a person skilled			
ate of the ac	ctual completion of the international search	Date of mailing of the international sear	ch report			
15	July 2004	29/07/2004				
ame and ma	alling address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo ni, Fax: (+31-70) 340-3018	Authorized officer Mand1, B				

INTERNATIONAL SEARCH REPORT

pational Application No PCT/EP2004/000162

A MO	CLAURIN J ET AL: "Therapeutically feetive antibodies against amyloid-beta eptide target amyloid-beta residues 4-10 inhibit cytotoxicity and	Relevant to claim No.
A Mo	CLAURIN J ET AL: "Therapeutically ffective antibodies against amyloid-beta eptide target amyloid-beta residues 4-10 of inhibit cytotoxicity and	
er pe ar	rfective antibodies against amyloid-beta eptide target amyloid-beta residues 4-10 nd inhibit cytotoxicity and	1-9
VC pa	ibrillogenesis." ATURE MEDICINE, Ol. 8, no. 11, November 2002 (2002-11), ages 1263-1269, XP002288573 SSN: 1078-8956 Ostract age 1266, right-hand column, last aragraph - page 1267, right-hand column, ast paragraph	
SE SE	1 361 439 A (PASTEUR INSTITUT) November 2003 (2003-11-12) Q ID NO: 79 ragraph '0077!	1-4,9
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Form PCT/ISA/210 (continuation of second sheet) (January 2004)

INTERNATIONAL SEARCH REPORT

International application No.

PCT/EP2004/000162

Вох	No. i	Nucleotide and/or amino acid sequence(s) (Continuation of item 1.b of the first sheet)
l		
1.	Inver	regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed nation, the international search was carried out on the basis of:
	a.	type of material
		X a sequence listing
1		table(s) related to the sequence listing
1	b.	format of motorial
İ	D.	format of material X in written format
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ľ		in computer readable form
	c.	time of filing/furnishing
		contained in the international application as filed
	;	filed together with the international application in computer readable form
		furnished subsequently to this Authority for the purpose of search
2.		In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
3.	Additio	onal comments:
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rm PC	THOME	210 (continuation of first short (1)) (Incurse 2004)

INTERNATIONAL SEARCH REPORT

information on patent family members

PCT/EP2004/000162

			1.01,21.2001,000102		
Patent document clted in search report		Publication date		Patent family member(s)	Publication date
WO 0072880	Α	07-12-2000	AU	5303100 A	18-12-2000
			BG	106241 A	30-08-2002
			BR	0011000 A	19-02-2002
			CA	2370311 A1	07-12-2000
			CN	1359301 T	17-07-2002
			CZ	20013824 A3	13-11-2002
			DE	10084643 TO	11-07-2002
			EE	200100626 A	17-02-2003
			EP	1185298 A2	13-03-2002
			GB	2368794 A	15-05-2002
			HU	0201250 A2	28-08-2002
			JP	2003517461 T	27-05-2003
			NO	20015773 A	25-01-2002
			NZ	515403 A	28-05-2004
			SK	16982001 A3	06-11-2002
			TR	200103447 T2	22-04-2002
			TR	200202231 T2	21-11-2002
			WO	0072880 A2	07-12-2000
			US	6710226 B1	23-03-2004
			US	6750324 B1	15-06-2004
			US	6743427 B1	01-06-2004
~			ZA	200109487 A	17-02-2003
EP 1361439	Α	12-11-2003	EP	1361439 A1	12-11-2003
			WO	03096022 A2	20-11-2003